

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Apparatus Claims 1-7 have been withdrawn from consideration.

Process Claim 8 has been amended to further recite that the process is performed employing an apparatus including the feature of Claim 1 that each of the air-supply boxes comprises a cylindrical damper having a perforated hole provided at its side, a casing for rotatably accommodating the damper and for forming an air channel only when the damper is at a predetermined rotational position, and a slide bearing provided in a space between the damper and the casing, wherein the cooling air supplied from the air-supply source can be supplied to the upper and/or lower blowing members through air channels by adjusting the rotational position of the damper. New Claim 14 corresponds to original Claim 9.

Claim 12 has been canceled. The rejection thereof under 35 U.S.C. § 112 is therefore believed to be moot. Additionally, Claim 8 has been amended to clarify that the “glass sheet” is the conveyed glass sheet, and so the rejection of Claim 8 under 35 U.S.C. § 112 is believed to be moot. The improper multiple dependency of Claim 13 has also been corrected.

Briefly, according to a feature of the invention set forth in Claim 8, in a process for air-cooling and tempering a glass sheet in which cooling air from upper and lower blowing members in a blowing area is alternately initiated and stopped, the steps of blowing the cooling air from the upper and lower blowing members, and stopping the blowing of the cooling air, is performed by adjusting the rotational position of cylindrical dampers in air-supply boxes, wherein the cylindrical dampers have a perforated hole and are rotatably accommodated in a casing, wherein an air channel is formed only when the damper is at a predetermined rotational position, and a slide bearing being provided in a space between the damper and the casing. As a result, the cooling air can be supplied from the air-supply source

to at least one of the upper and lower blowing members through the air channels by adjusting the rotational position of the damper.

For example, referring to the non-limiting embodiment disclosed in the specification, and particularly Figures 7-11, a damper 130 accommodated between casing halves 134-136 has perforated holes 142. Air channels are provided in the air-supply box when the perforated holes 142 and openings 132 of the casing are aligned with one another by the rotation of the damper.

The features of amended Claim 8 are not taught by U.S. patent 6,722,160 (Nemugaki et al.) or its corresponding publication WO 00/78685, which were applied under 35 U.S.C. § 102 to reject Claims 8-11. Nemugaki et al. discloses a method for air-cooling glass sheets wherein glass sheets are cooled and tempered by an air-cooling/tempering device 16 having upper and lower blowing heads 24-26. Each of the blowing heads receives cooling air from an air supplying port 130 or 150, each of which has a damper 250 or 252. However, as is evident from Figure 8 of Nemugaki et al., the dampers 250-252 are simply pivotally mounted plate dampers. They are not cylindrical dampers having perforated holes such that an air channel is formed by rotating the cylindrical dampers. Thus Nemugaki et al. cannot teach a step of adjusting a rotational position of a circular damper for blowing or stopping cooling air. Amended Claim 8 therefore clearly defines over this reference.

Claim 9 and new Claim 14 further recite that the blowing member comprises an air-nozzle swingable in the conveying direction of the glass sheet. An example of this is seen in Figure 4 wherein the air-nozzles 25 are mounted to swing in the direction of movement of the glass sheet. According to the Office Action, this is taught by the portion of Claim 1 of Nemugaki et al. which recites that the plurality of air-blowing heads are “configured to move vertically so as to correspond to the vertical movement of each of the plurality of tempering rollers.” However, it is evident from the description of Nemugaki et al. that this merely

means that the vertical movement of the air-blowing heads is coordinated with the movement of the glass sheets. See, for example, Figure 9 at (B)-(F) wherein the blowing heads 24 and 26 are moved vertically in coordination with the movement of the glass sheets through the cooling/tempering device. There is, however, no teaching or suggestion that air-nozzles of the blowing heads are swingable "in the conveying direction of" the glass sheet. For this reason as well, Claims 9-11 and 13, as well as Claim 14, clearly define over Nemugaki et al.

The rejection of Claim 12 under 35 U.S.C. § 103 is believed to be moot in light of the cancellation thereof.

Concerning the obviousness-type double patenting rejection of Claims 8-11 based upon Claims 1 and 3 of Nemugaki et al., it is noted that Claims 1 and 3 of Nemugaki et al. describe neither the cylindrical dampers now recited in Claim 8 nor the air-nozzle swingable in the conveying direction of the glass sheet which is recited in Claims 9-11 and 13-14. The double patenting rejection is therefore also believed to be moot.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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